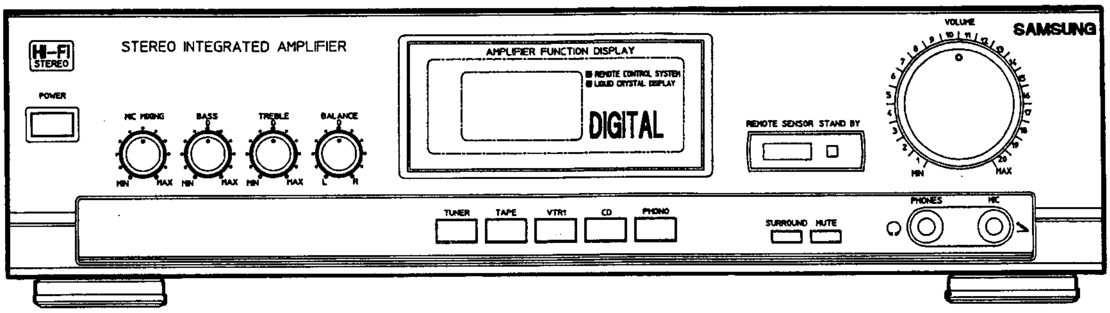
SAMS-01049

SAMSUNG

SERVICE MANUAL

RS - 750A

STEREO AMPLIFIER


HI-FI STEREO
STEREO INTEGRATED AMPLIFIER
POWER
MIC MIXING
BASS
TREBLE
BALANCE
MIN
MAX
L
R
AMPLIFIER FUNCTION DISPLAY
REMOTE CONTROL SYSTEM
LIQUID CRYSTAL DISPLAY
DIGITAL
REMOTE SENSOR
STAND BY
VOLUME
SAMSUNG
TUNER
TAPE
VTR1
CD
PHONO
SURROUND
MUTE
PHONES
MIC

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1. SPECIFICATION

● POWER AMP SECTION

POWER OUTPUT: 50 WATTS/CH (8 OHM)
TOTAL HARMONIC DISTORTION (T.H.D): 0.05%
FREQUENCY RESPONSE: 20Hz-20KHz ± 0.5dB

● PRE AMP SECTION

1) INPUT SENSITIVITY (50 WATTS/CH 8 OHM)
   PHONO: 2.5mV (± 2dB)
   TUNER/CD/VTR1/TAPE: 150mV (± 2dB)
   MIC: 0.5mV
2) PHONO EQUALIZAION (RIAA)
   : 30Hz - 15KHz ± 0.5dB
3) PHONO OVERLOAD
   (AT 1KHz): 150mV
4) SEPARATION
   100Hz : 50dB
   1KHz : 50dB
   10KHz : 40dB
5) SIGNAL TO NOISE RATIO
   (WITH - B.P.F)
   PHONO : 70dB
   CD : 80dB
6) TONE CONTROL
   BASS: 100Hz ± 9dB
   TREBLE: 10KHz ± 9dB
   LOUDNESS (VOLUME -30dB)
   : 100Hz + 6dB, 10KHz + 4dB

● GENERAL

POWER CONSUMPTION: 220W
SET SIZE: 420(W) x 100(H) x 260(D)
NET WEIGHT: 6.2Kg

* WHEN CONNECTING DC POWER SUPPLY TERMINAL ON AMP TO DC POWER INPUT TERMINAL ON TUNER OR EQUALIZER, BE SURE TO UNPLUG AMP POWER CORD.
IF THERE IS A SHORT IN CONNECTING OR SERVICING, CHECK THE FUSIBLE RESISTOR (RFR 1/2W, RFR 3/0.25W RFR 4/0.25W) IN THE MAIN PCB OF THE AMPLIFIER.

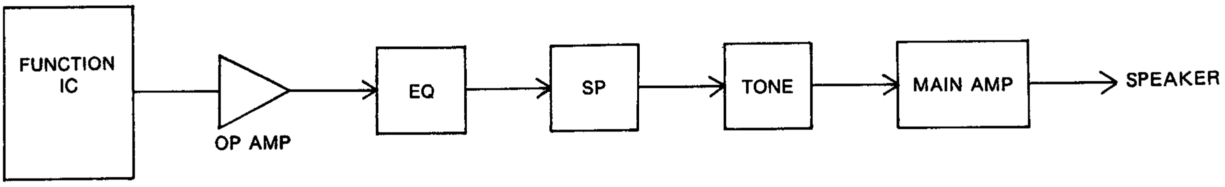
* REMEMBER THAT IF ONE OF THE B+ B- OR GND IS CUT WHILE POWER IS BEING SUPPLIED, POWER IC MIGHT BE DAMAGED.

2. SERVICING NOTE

1. THERE ARE SOME PARTS WHICH HAVE SAFETY FEATURES IN THE UNIT. THEREFORE, WHEN REPLACING THESE PARTS, USE IDENTICAL AND STANDARDIZED PARTS ONLY (SAFETY PARTS ARE MARKED BY ⚠ IN THE PARTS LIST).

2. WHEN THE UNIT MISOPERATES OR MISOPERATES WHEN USING THE REMOCON CONTROLLER;
IF IT IS A CIRCUIT PROBLEM, REFER TO CIRCUIT DIAGRAM. IF IT IS NOT A CIRCUIT PROBLEM, RESET THE UNIT BY SHORTENING PIN23 RESET PORT OF MICOM IC UIC1 AND GROUND AND THEN OPERATE THE UNIT.

3. MUSIC WILL BE HEARD ONLY WHEN THE EQUALIZER IS CONNECTED TO THE AMPLIFIER IN THE COMPONENT SYSTEM.

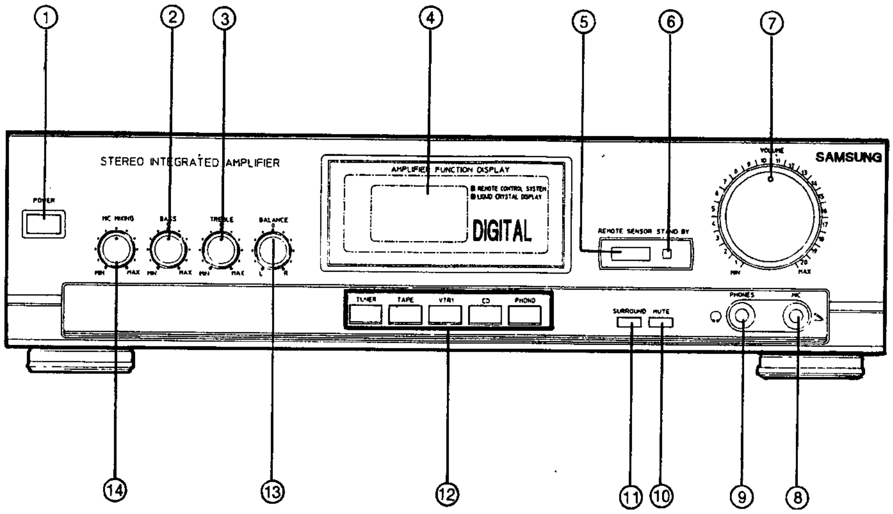


4. WHEN THE EQ SET IS NOT USED,
CONNECT SHORT RING TO IN/OUTPUT JACK ON EQUALIZER BEFORE USING THE UNIT.

5. THIS UNIT IS FOR VTR SOUND SIGNAL ONLY. PICTURE SIGNAL CAN NOT BE PUT THROUGH THE UNIT.

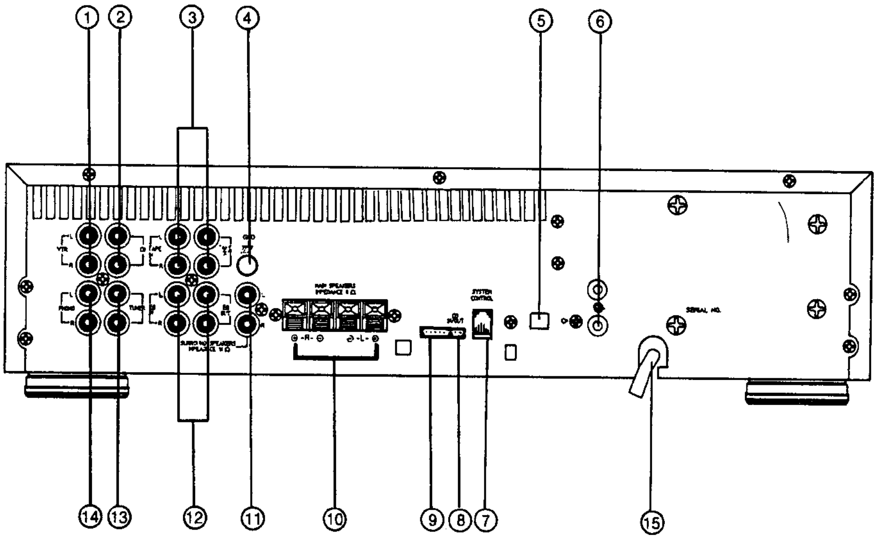
3. LOCATION AND FUNCTION

3-1. FRONT PANEL


①
②
③
④
⑤
⑥
⑦
STEREO INTEGRATED AMPLIFIER
POWER
MIC MIXING
BASS
TREBLE
BALANCE
MIN
MAX
AMPLIFIER FUNCTION DISPLAY
DIGITAL
REMOTE SENSOR
STAND BY
VOLUME
SAMSUNG
TUNER
TAPE
VTR1
CD
PHONO
SURROUND
MUTE
PHONES
MIC
⑭
⑬
⑫
⑪
⑩
⑨
⑧

1. POWER BUTTON
2. TONE CONTROL (BASS)
3. TONE CONTROL (TREBLE)
4. DISPLAY
5. REMOTE CONTROL SENSOR
6. STAND-BY INDICATOR
7. VOLUME
8. MIC JACK
9. HEADPHONE JACK
10. MUTE BUTTON
11. SURROUND BUTTON
12. FUNCTION SELECTOR BUTTON
13. BALANCE
14. MIC MIXING VOLUME

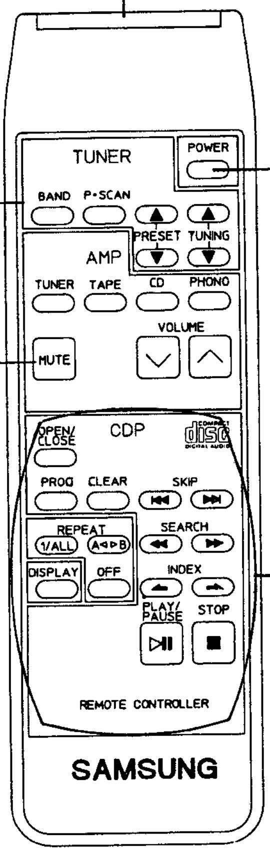
3-2. REAR PANEL


①
②
③
④
⑤
⑥
VTR
PHONO
TUNER
GND
SYSTEM CONTROL
SERIAL NO.
⑭
⑬
⑫
⑪
⑩
⑨
⑧
⑦
⑮

1. VTR AUDIO INPUT JACK
2. CD INPUT JACK
3. TAPE IN/OUT JACK
4. GROUND TO TURN TABLE
5. VOLTAGE SELECTOR (OPTION)
6. AC OUTLET
7. SYSTEM CONTROL JACK
8. CD IN/OUT JACK
9. DECK DC JACK (OPTION)
10. SPEAKER JACK
11. SURROUND SPEAKER JACK
12. EQ IN/OUT JACK
13. TUNER INPUT JACK
14. PHONO INPUT JACK
15. AC POWER CORD

3-3. REMOTE CONTROLLER

INFRARED BEAM TRANSMIT WINDOW



TUNER
POWER
BAND
P•SCAN
PRESET
TUNING
AMP
TUNER
TAPE
CD
PHONO
VOLUME
MUTE
OPEN/CLOSE
CDP
COMPACT DISC DIGITAL AUDIO
PROG
CLEAR
SKIP
REPEAT
1/ALL
A◁▷B
SEARCH
DISPLAY
OFF
INDEX
PLAY/PAUSE
STOP
REMOTE CONTROLLER
SAMSUNG

POWER ON/OFF BUTTON

TUNER SECTION

- BAND SELECTOR BUTTON
- P.SCAN (Preset Scan) BUTTON
- PRESET UP/DOWN
  (△ / ▽) BUTTON
- TUNING UP/DOWN
  (△ / ▽) BUTTON

AMP SECTION

- FUNCTION SELECTOR
- TUNER SELECTOR BUTTON
- TAPE SELECTOR BUTTON
- CD SELECTOR BUTTON
- PHONO SELECTOR BUTTON
- MUTE BUTTON
- VOLUME UP/DOWN
  (∧ / ∨) BUTTON

CD SECTION

- OPEN/CLOSE BUTTON
- PROGRAM BUTTON
- CLEAR BUTTON
- SKIP UP (▶▶I) BUTTON
- SKIP DOWN (I◀◀) BUTTON
- SEARCH (◀◀ or ▶▶) BUTTON
- INDEX (⇽ or ⇾) BUTTON
- PLAY/PAUSE (▶II) BUTTON
- STOP (■) BUTTON
- DISPLAY BUTTON
- REPEAT
  - 1/ALL: ONE/ALL MUSIC
    REPEAT BUTTON
  - A ◁▷ B. * * *
  - OFF: * * *

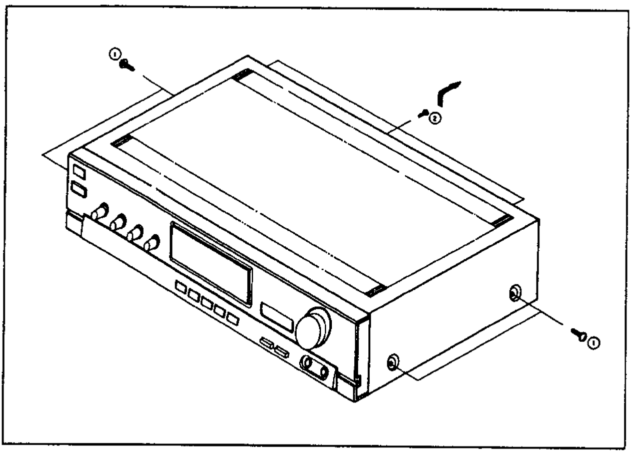
* * *

- REPEAT (A ◀ ▶ B) switch: To repeat playback between specific point on the disc during play.
  The point where the switch is pressed is memorized as "A" (START) point of the repeat play.
  The point where the switch is pressed a second time is memorized as the "B" (END) point of repeat play.

- OFF switch: To erase the memory points "A" and "B", press OFF switch.

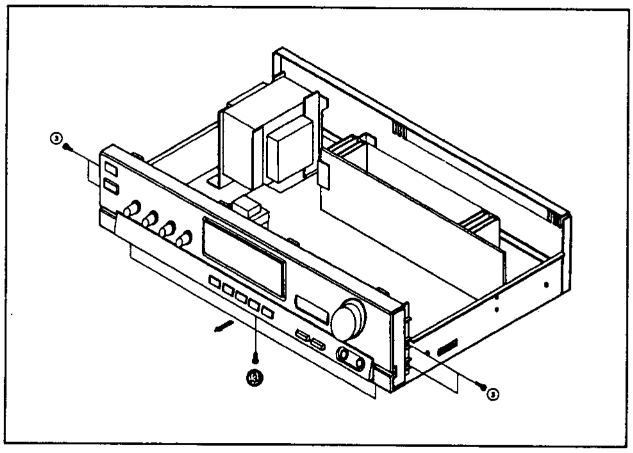
4. DISASSEMBLY

4-1. CABINET-TOP



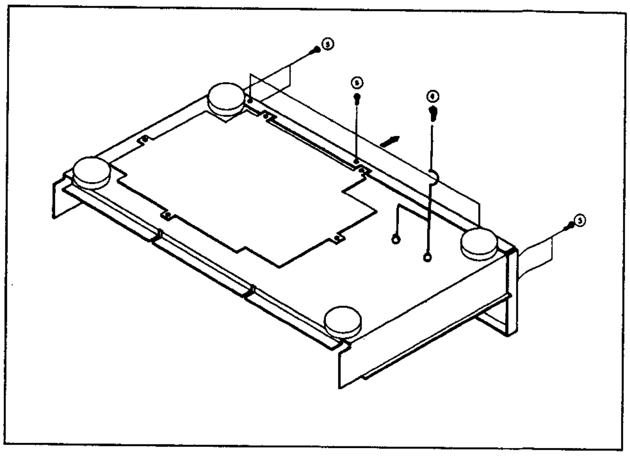
REMOVE 4 SCREWS (①) AND 3 SCREWS (②).
SPRING BOTH SIDES (OF THE CABINET TOP) OUT AND PULL UP (↗).

4-2. FRONT PANEL



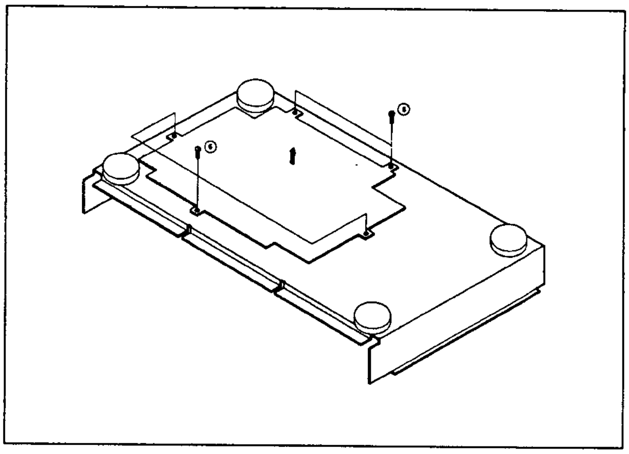
REMOVE SCREWS (③) AND PULL IN THE DIRECTION OF AN ARROW.

4-3. CHASSIS REAR



REMOVE 20 SCREWS (⑤) AND TWO SCREWS (④) AND PULL IN THE DIRECTION OF ARROW.

4-4. CABINET BOTTOM

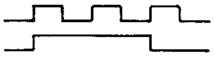


REMOVE 5 SCREWS (⑥) FROM THE BOTTOM AND PULL IN THE DIRECTION OF ARROWS.

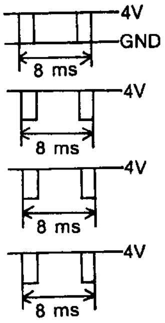
5. OPERATION INSTRUCTION

● MICOM (LC6520H) UIC1 FUNCTION & OPERATION

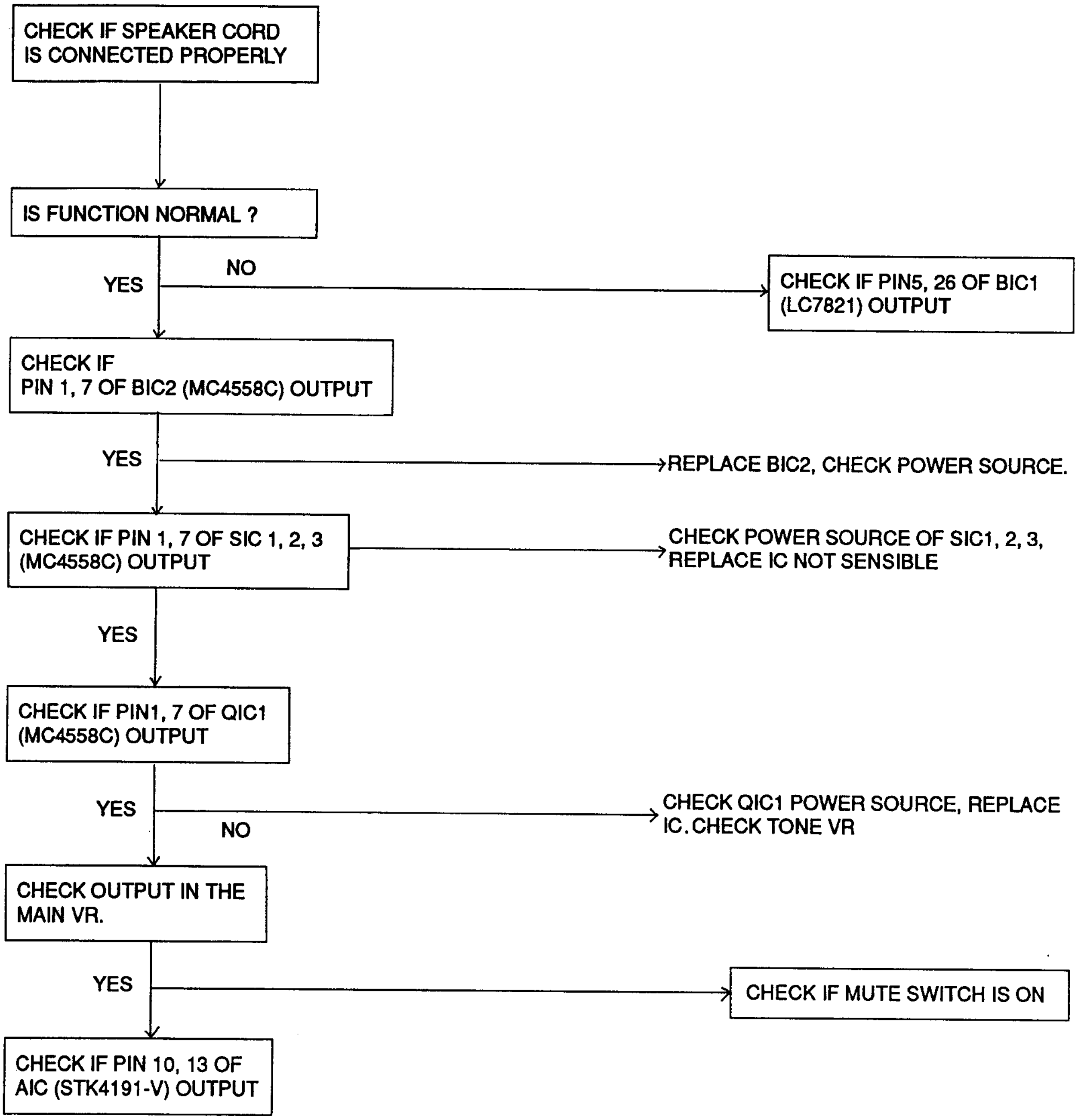
PIN NO.	IN OUT	FUNCTION & OPERATION	PORT	OPERATION	
				H	L
1	IN	CD INPUT CD PLAY	PA2	○	
2	IN	CD OSC STOP OUTPUT TUNER FUNCTION "LOW" & FUNCTION "HIGH"	PA3		○
3	IN	FUNCTION INPUT (PHONO)	PB0	○	
4	IN	FUNCTION INPUT (VTR1, TUNER)	PB1	○	
5	IN	FUNCTION INPUT (CD, MUTE)	PB2	○	
6	IN	FUNCTION INPUT (POWER, TAPE)	PB3	○	
7	OUT	FUNCTION OUTPUT (PHONO, TUNER, CD, TAPE)	PC0	○	
8	OUT	FUNCTION OUTPUT (VTR1)	PC1	○	
9	OUT	FUNCTION OUTPUT (POWER, MUTE)	PC2	○	
10	IN	VOLUME SELECTION LOW: ELEC. VOLUME HIGH: MOTOR VOLUME	PC3	○	
11	OUT	NOT USED	PD0	○	
12	OUT	REMOTE VOLUME UP OUTPUT	PD1	○	
13	OUT	REMOTE VOLUME DOWN, OUTPUT	PD2	○	
14	OUT	POWER OUTPUT	PD3	○	
15	OUT	MUTE OUTPUT	PE0	○	
16	OUT	NOT USED	PE1		
17	IN	GND	PE2		○
18	IN	GND	PE3		○
19	IN	GND	TEST		○
20	IN	GND	Vss		○
21	OUT	MICOM CLOCK OUTPUT	OSC1		○
22	IN	MICOM CLOCK INPUT	OSC2	○	
23	IN	MICOM RESET INPUT	$\overline{\text{RES}}$	○	
24	OUT	GND	PF1/SI	○	

PIN NO.	IN OUT	FUNCTION & OPERATION	PORT	OPERATION	
				H	L
25	OUTPUT	GND	PF1/SO	○	
26	IN	GND	PF2/$\overline{\text{SCK}}$	○	
27	IN	REMOCON DATA INPUT	PF3/$\overline{\text{INT}}$	○	
28	OUT	REMOCON MOTOR VOLUME LED DRIVE VOLUME UP/DOWN MUTE ON 	PG0	○	
29	OUT	REMOCON CLOCK	PG1	○	
30	OUT	REMOCON DATA OUTPUT	PG2	○	
31	OUT	REMOCON CE OUTPUT	PG3	○	
32	OUT	LCD DRIVER $\overline{\text{INH}}$ OUTPUT	PI0	○	
33	OUT	LCD DRIVER CE OUTPUT	PI1	○	
34	OUT	LCD DRIVER CLOCK OUTPUT	PI2	○	
35	OUT	LCD DRIVER DATA OUTPUT	PI3	○	
36	OUT	NOT USED	PJ0	○	
37	OUT	FUNCTION CONTROL CLOCK OUTPUT	PJ1	○	
38	OUT	FUNCTION CONTROL DATA OUTPUT	PJ2	○	
39	OUT	FUNCTION CONTROL CE OUTPUT	PJ3		
40	OUT	B^+ (+5V)	VDD	○	
41	IN	NOT USED	PA0		
42	IN	POWER ON/OFF INPUT	PA1	○	

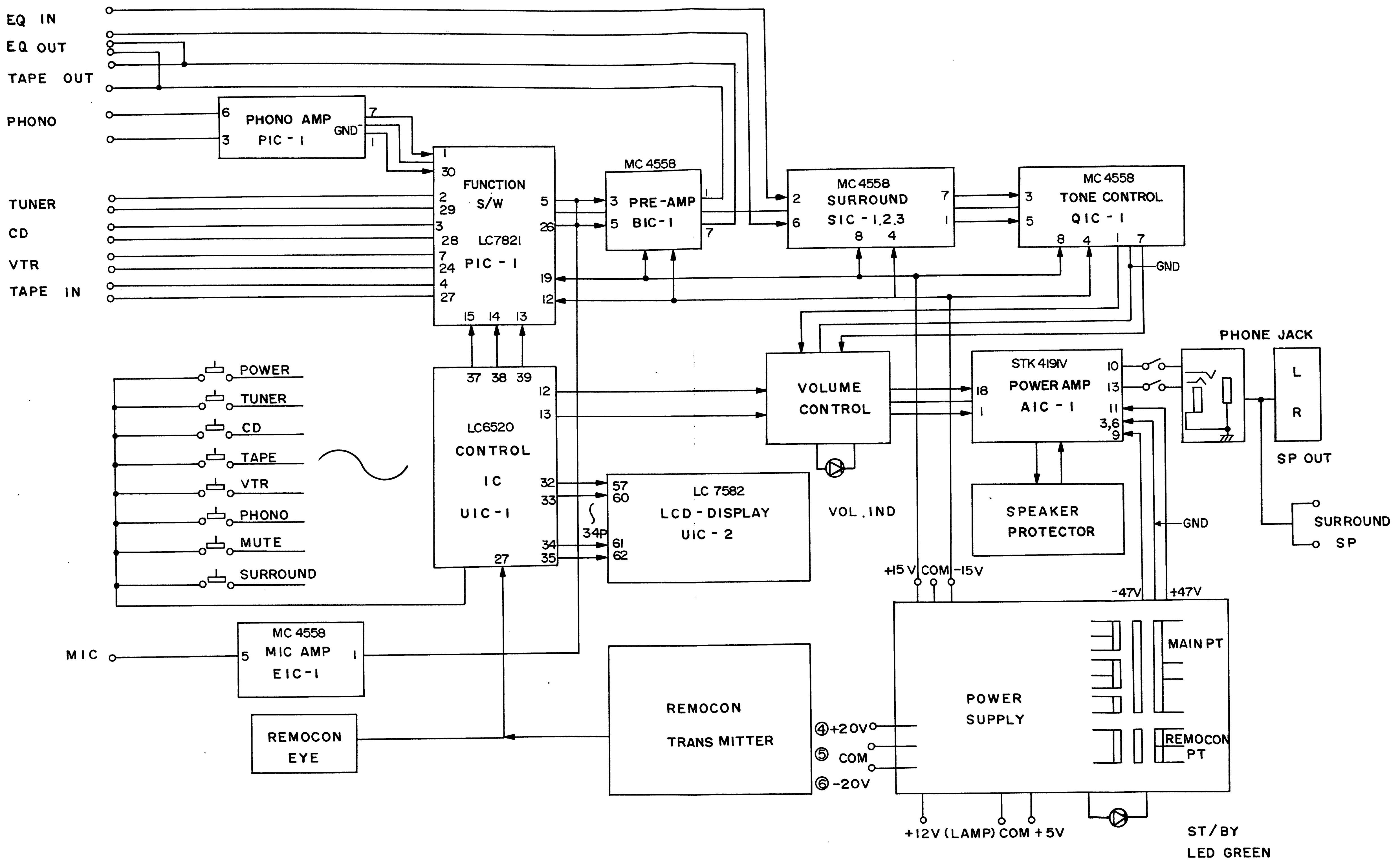
6. TROUBLE SHOOTING

SYMPTOM	CHECK POINT
POWER ON/OFF NOT WORKING	1. UIC2 PIN 14 CHECK POWER ON "HIGH" OFF "LOW" 2. RQ1 CHECK POWER ON BASE "HIGH" OFF "LOW"
FUNCTION NOT WORKING PHONO VRT1, TUNER MUTE, CD POWER-TAPE	 CHECK UIC1 PIN 3. FUNCTION ON FUNCTION OFF——4V ——Vss CHECK UIC1 PIN 4. FUNCTION ON FUNCTION OFF——4V ——Vss CHECK UIC1 PIN 5. FUNCTION ON FUNCTION OFF——4V ——Vss CHECK UIC1 PIN 6. FUNCTION ON FUNCTION OFF——4V
WHEN TUNER FUNCTION CD OSC OFF NOT WORKING (CD OSC OFF-NORMAL)	CHECK UIC1 PIN2. TUNER FUNCTION "LOW" CD FUNCTION "HIGH"
MUTE NOT WORKING	CHECK UIC1 PIN 15. MUTE ON "HIGH" MUTE OFF "LOW"
REMOCON VOLUME UP/DOWN NOT WORKING	CHECK UIC1 PIN 12. UP "HIGH" PIN 13. DOWN "HIGH"
LCD DISPLAY NOT WORKING	1. LCD DRIVER BETWEEN LC7582 AND LCD- PATTERN CHECK 2. LCD DRIVER SOLDER CHECK
LCD DISPLAY NOT SENSIBLE	LCD DRIVER LC7582 PIN NO 57 CHECK (WHEN LCD OPERATES : "HIGH")

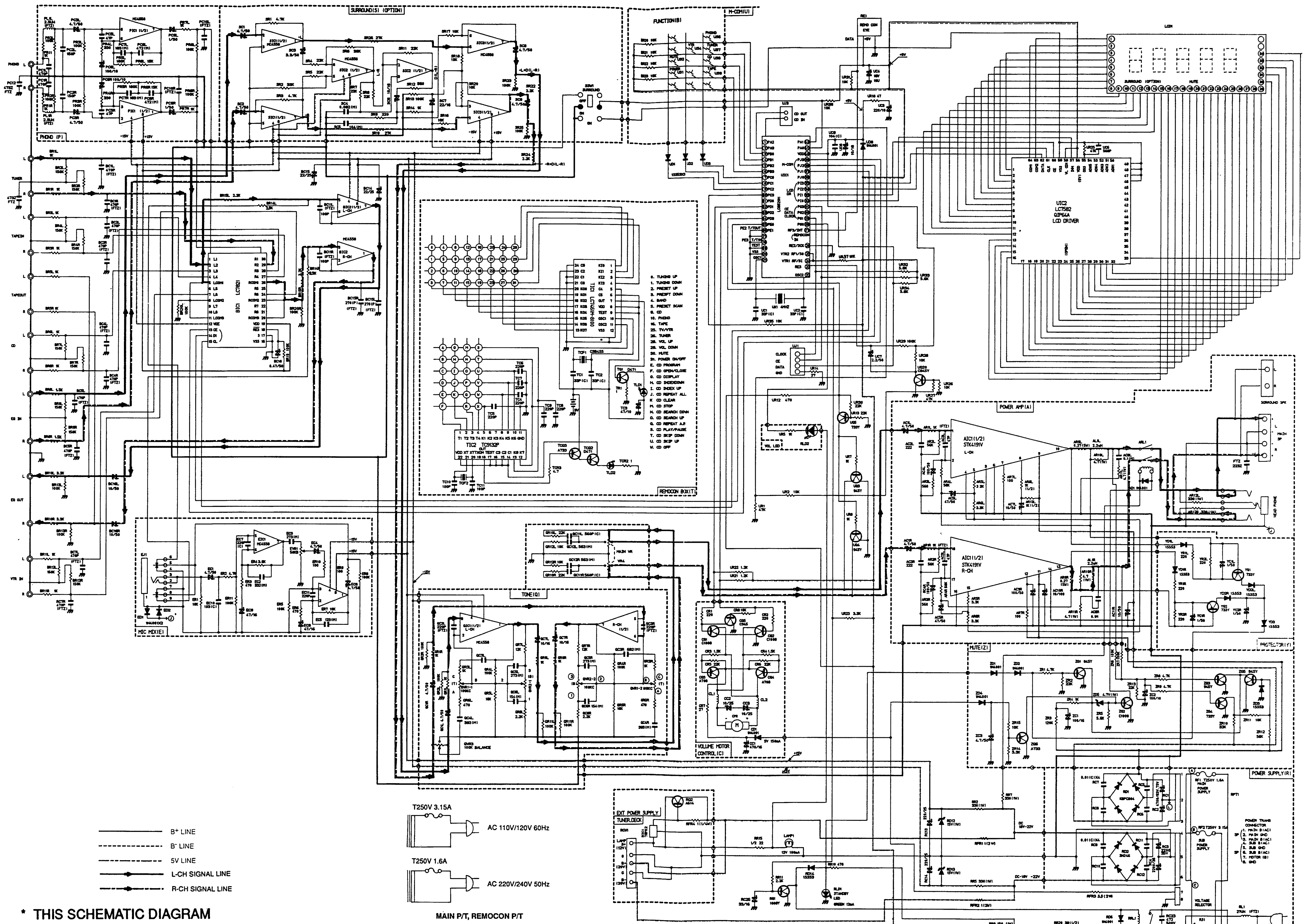
7. TROUBLE SHOOTING PROCEDURE


CHECK IF SPEAKER CORD IS CONNECTED PROPERLY
IS FUNCTION NORMAL ?
YES
NO
CHECK IF PIN5, 26 OF BIC1 (LC7821) OUTPUT
CHECK IF PIN 1, 7 OF BIC2 (MC4558C) OUTPUT
YES
REPLACE BIC2, CHECK POWER SOURCE.
CHECK IF PIN 1, 7 OF SIC 1, 2, 3 (MC4558C) OUTPUT
CHECK POWER SOURCE OF SIC1, 2, 3, REPLACE IC NOT SENSIBLE
YES
CHECK IF PIN1, 7 OF QIC1 (MC4558C) OUTPUT
YES
NO
CHECK QIC1 POWER SOURCE, REPLACE IC. CHECK TONE VR
CHECK OUTPUT IN THE MAIN VR.
YES
CHECK IF MUTE SWITCH IS ON
CHECK IF PIN 10, 13 OF AIC (STK4191-V) OUTPUT

8. BLOCK DIARAM

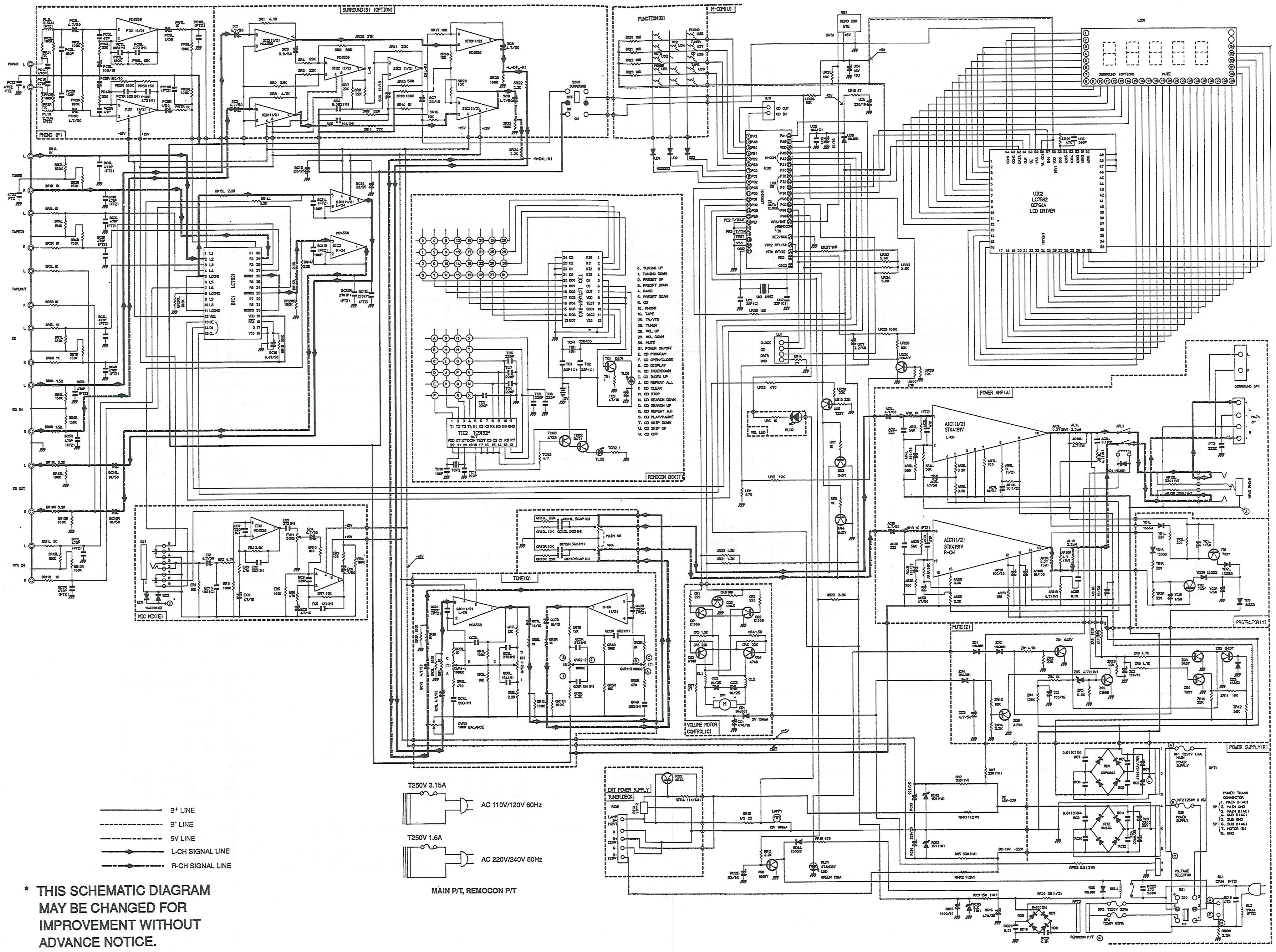

EQ IN
EQ OUT
TAPE OUT
PHONO
PHONO AMP
PIC - 1
GND
TUNER
CD
VTR
TAPE IN
FUNCTION
S/W
LC7821
PIC - 1
MC 4558
PRE-AMP
BIC - 1
MC 4558
SURROUND
SIC - 1,2,3
MC 4558
TONE CONTROL
QIC - 1
GND
PHONE JACK
L
R
SP OUT
SURROUND
SP
POWER
TUNER
CD
TAPE
VTR
PHONO
MUTE
SURROUND
LC6520
CONTROL
IC
UIC - 1
VOLUME
CONTROL
VOL. IND
STK 4191V
POWER AMP
AIC - 1
SPEAKER
PROTECTOR
GND
LC 7582
LCD - DISPLAY
UIC - 2
34P
+15 V
COM
-15 V
-47V
+47V
MAIN PT
REMOCON
PT
POWER
SUPPLY
MIC
MC 4558
MIC AMP
EIC - 1
REMOCON
EYE
REMOCON
TRANS MITTER
④+20V
⑤ COM
⑥ -20V
+12V (LAMP) COM +5V
ST/BY
LED GREEN

9. SCHEMATIC DIAGRAM


PHONO (P)
SURROUND(S) (OPTION)
FUNCTION(B)
M-COM(U)
LCD
SURROUND (OPTION)
MUTE
UIC2 LC7582 QIP64A LCD DRIVER
REMOCON BOX(T)
TIC2 TC9132P
0. TUNING UP
1. TUNING DOWN
2. PRESET UP
3. PRESET DOWN
4. BAND
5. PRESET SCAN
8. CD
10. PHONO
16. TAPE
25. TV/VTR
26. TUNER
28. VOL UP
29. VOL DOWN
30. MUTE
31. POWER ON/OFF
E. CD PROGRAM
F. CD OPEN/CLOSE
G. CD DISPLAY
H. CD INDEXDOWN
I. CD INDEX UP
J. CD REPEAT ALL
K CD CLEAR
M. CD STOP
N. CD SEARCH DOWN
O. CD SEARCH UP
Q. CD REPEAT A.B
S. CD PLAY/PAUSE
T. CD SKIP DOWN
U. CD SKIP UP
W. CD OFF
POWER AMP(A)
AIC1(1/2) STK4191V L-CH
AIC1(1/2) STK4191V R-CH
SURROUND SP
MAIN SP
HEAD PHONE
PROTECTOR(Y)
MUTE(Z)
TONE(G)
MIC MIX(E)
VOLUME MOTOR CONTROL(C)
EXT POWER SUPPLY
TUNER/DECK
POWER SUPPLY(R)
REMOCON P/T
TUNER
TAPEIN
TAPEOUT
CD
EQ IN
EQ OUT
VTR IN
B⁺ LINE
B⁻ LINE
5V LINE
L-CH SIGNAL LINE
R-CH SIGNAL LINE
T250V 3.15A
AC 110V/120V 60Hz
T250V 1.6A
AC 220V/240V 50Hz
MAIN P/T, REMOCON P/T

* THIS SCHEMATIC DIAGRAM MAY BE CHANGED FOR IMPROVEMENT WITHOUT ADVANCE NOTICE.

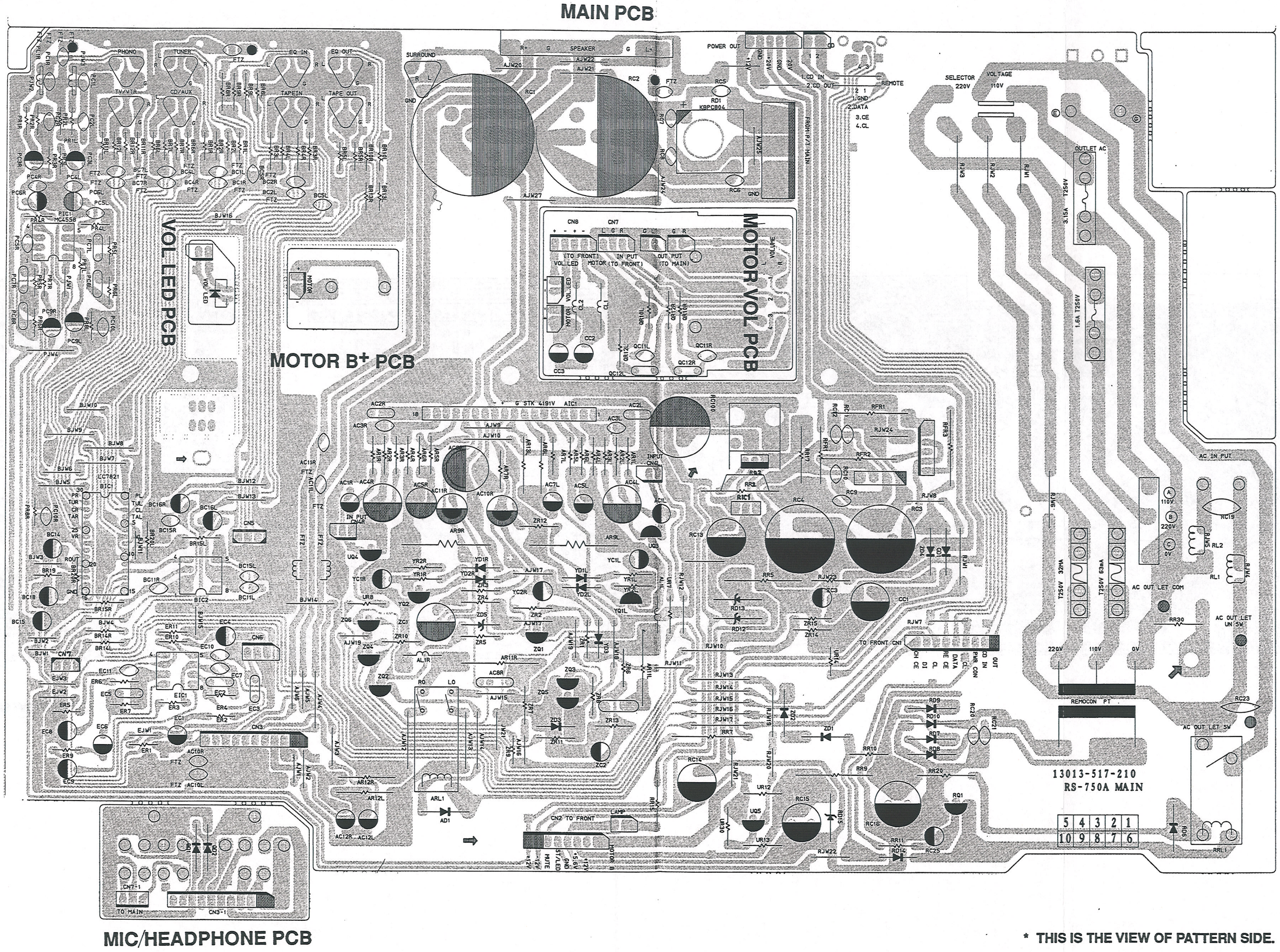
9. SCHEMATIC DIAGRAM


PHONO (P)
SURROUND(S) (OPTION)
FUNCTION(B)
M-COM(U)
REMOCON BOX(T)
MIC MIX(E)
TONE(Q)
VOLUME MOTOR CONTROL(C)
POWER AMP(A)
PROTECTOR(F)
MUTE(Z)
POWER SUPPLY(R)
EXT POWER SUPPLY
TUNER/DECK
PHONO
TUNER
TAPE(IN)
TAPEOUT
CD
EQ IN
EQ OUT
VTR IN
STK4191V
LC7582
LCD DRIVER
HEAD PHONE
MAIN SP
SURROUND SPK
B+ LINE
B- LINE
5V LINE
L-CH SIGNAL LINE
R-CH SIGNAL LINE
T250V 3.15A
AC 110V/120V 60Hz
T250V 1.6A
AC 220V/240V 50Hz
MAIN P/T, REMOCON P/T

* THIS SCHEMATIC DIAGRAM
MAY BE CHANGED FOR
IMPROVEMENT WITHOUT
ADVANCE NOTICE.

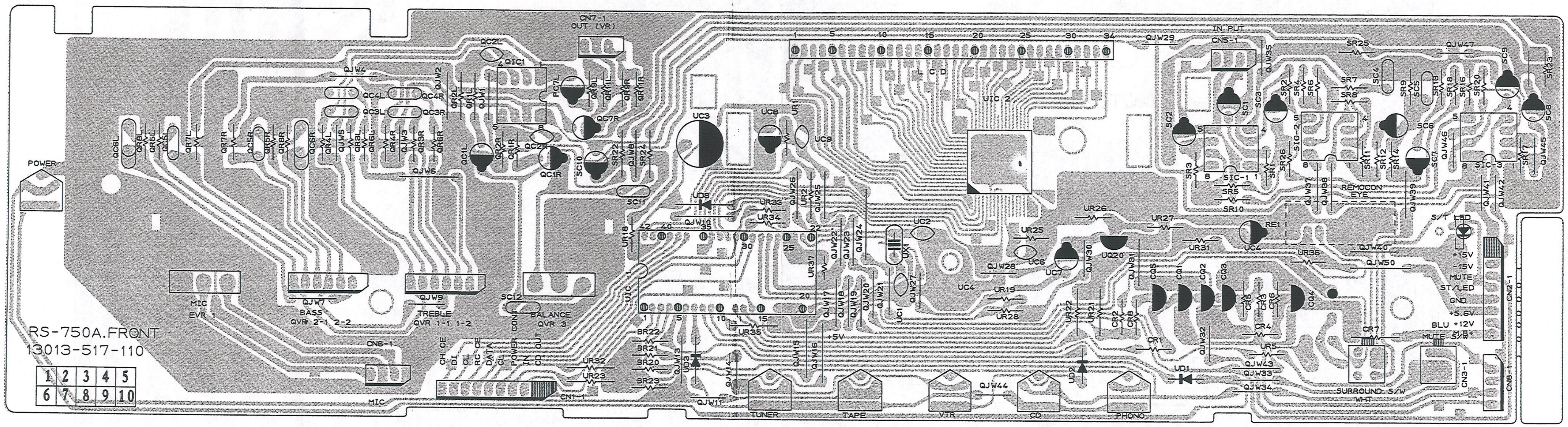
10. CIRCUIT BOARD DIAGRAM

10-1. MAIN PCB


MAIN PCB
VOL LED PCB
MOTOR B+ PCB
MOTOR VOL PCB
MIC/HEADPHONE PCB
13013-517-210
RS-750A MAIN

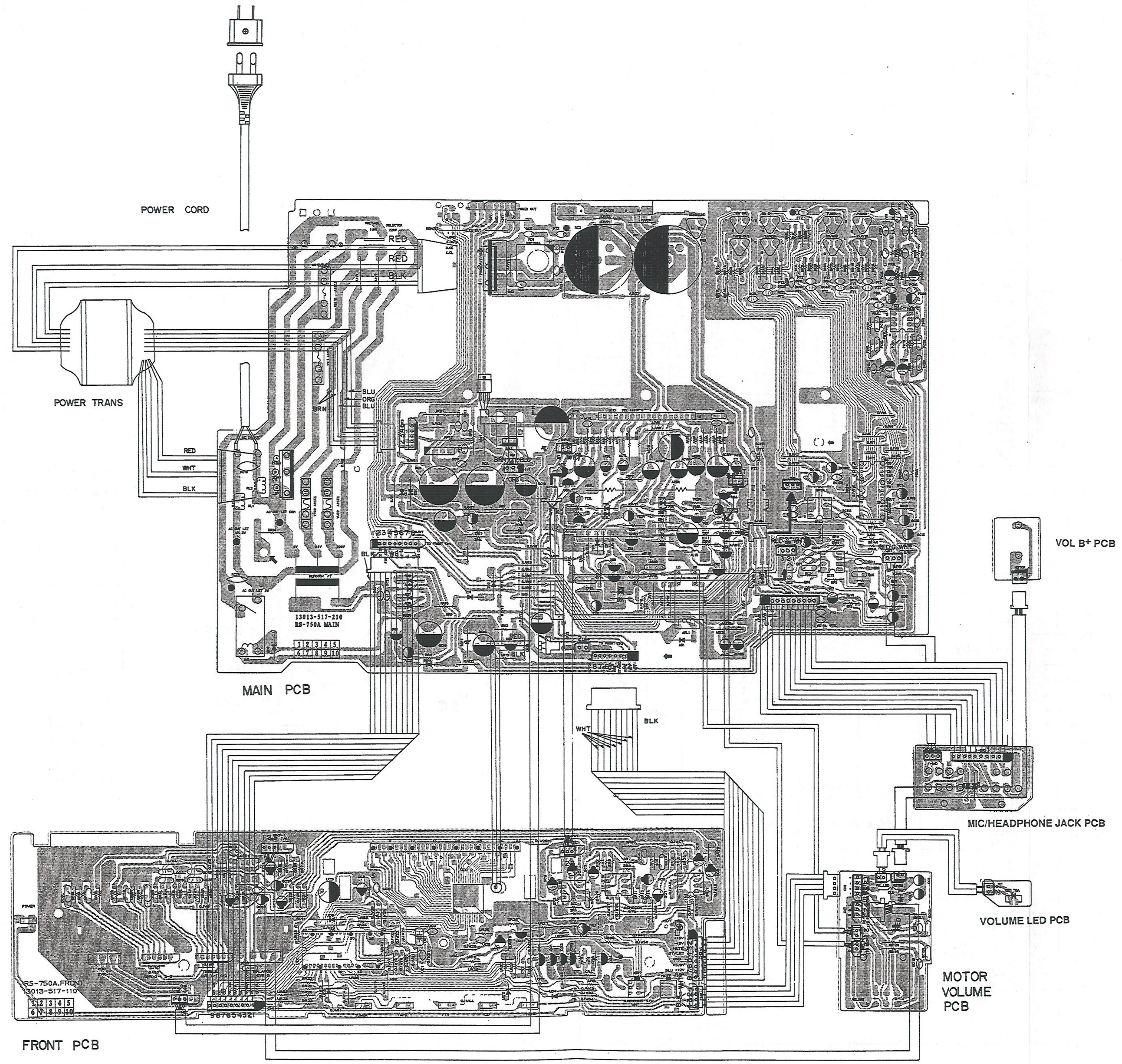
* THIS IS THE VIEW OF PATTERN SIDE.

10-2. FRONT PCB


RS-750A.FRONT
13013-517-110
POWER
MIC EVR 1
QJW7 BASS QVR 2-1 2-2
QJW9 TREBLE QVR 1-1 1-2
SC12 BALANCE QVR 3
CN6-1
MIC
CN1-1
CN7-1 OUT (VR)
QIC1
UC3
UIC 2
LCD
UIC 1
UC4
IN PUT CN5-1
REMOCON EYE
SIC-1
SIC-2
SIC-3
S/T LED
+15V
-15V
MUTE
ST/LED
GND
+5.6V
BLU +12V
MUTE S/B
CN2-1
CN3-1
CN8-1
SURROUND S/W WHT
TUNER
TAPE
VTR
CD
PHONO
+5V
CH CE
IDI
CL
RC CE
DATA
CL
POWER CON
IN OUT
1 2 3 4 5
6 7 8 9 10

* THIS IS THE VIEW OF PATTERN SIDE.

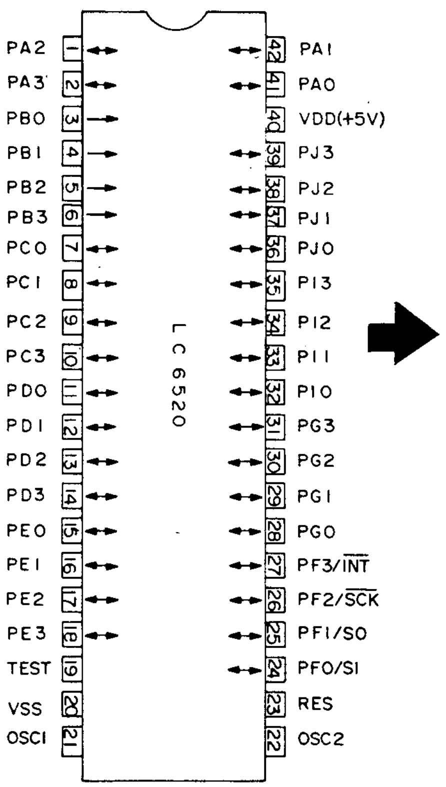
11. WIRING DIAGRAM (PARTS SIDE)

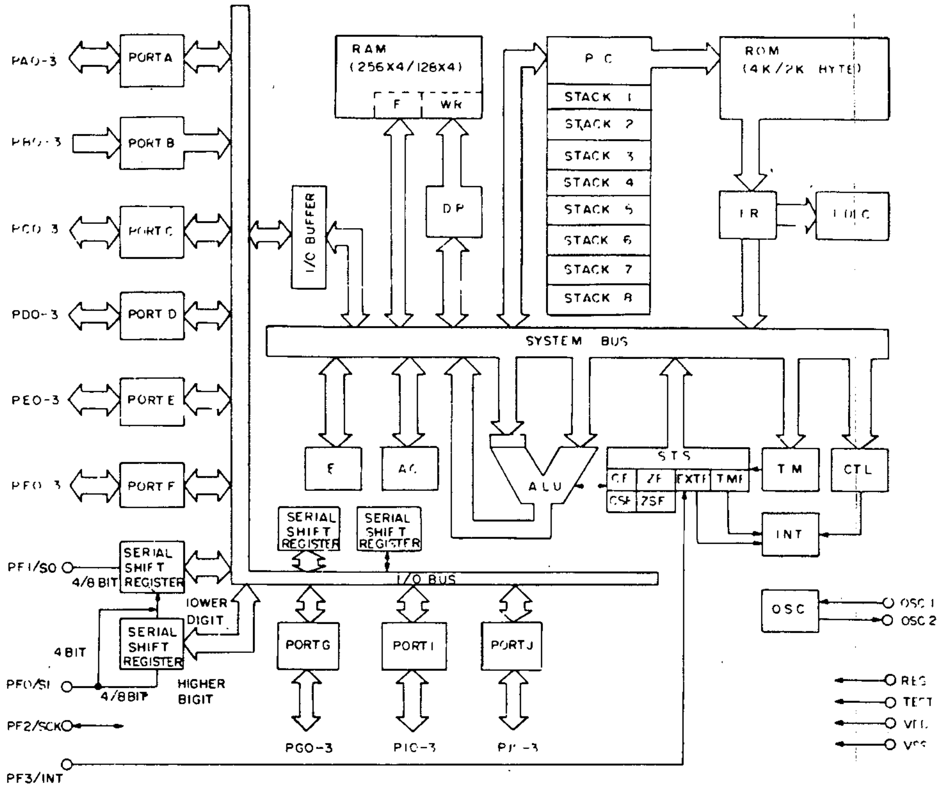

POWER CORD
POWER TRANS
RED
WHT
BLK
RED
RED
BLK
BLU
ORG
BLU
BRN
13013-517-210
RS-750A MAIN
MAIN PCB
BLK
WHT
VOL B+ PCB
MIC/HEADPHONE JACK PCB
VOLUME LED PCB
MOTOR
VOLUME
PCB
RS-750A.FRONT
13013-517-110
FRONT PCB

12. IC, TR AND LCD LEADOUT

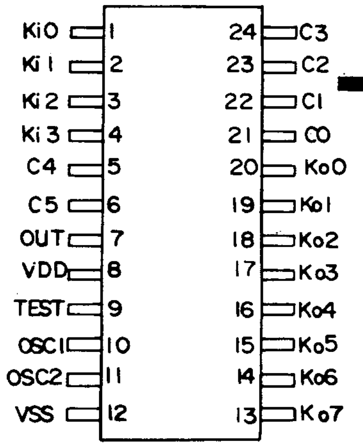
1. LC6520H (UIC1; MICOM)

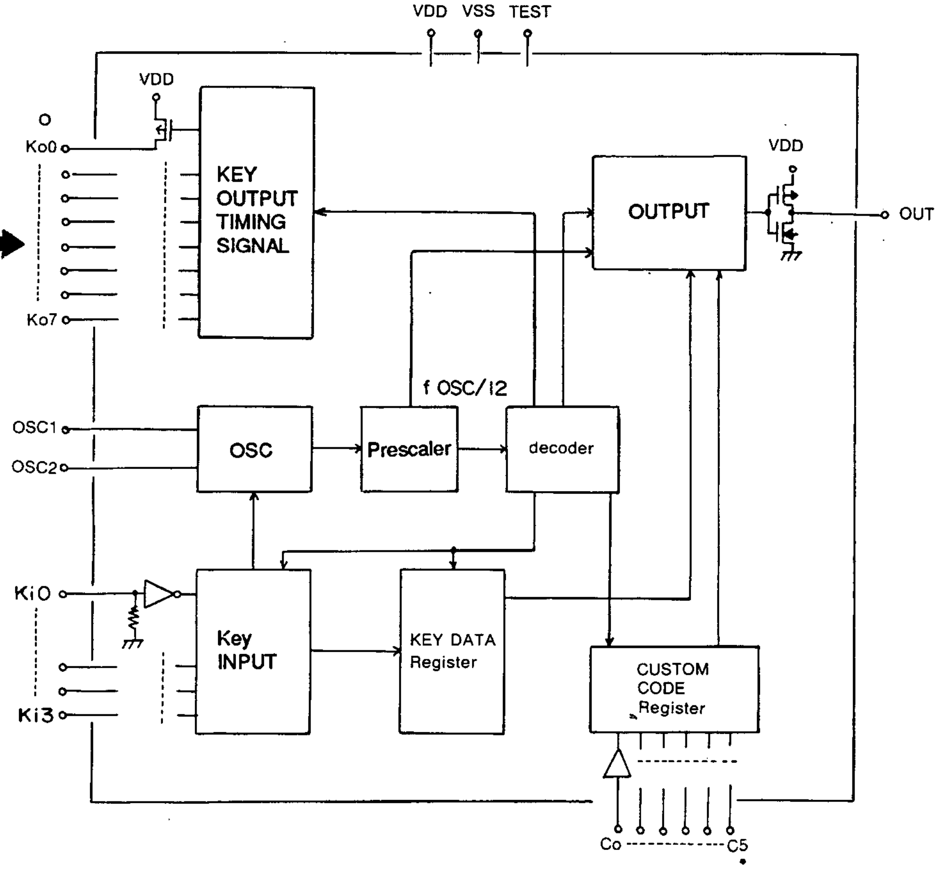
DIP 42S


PA2 1
PA3 2
PB0 3
PB1 4
PB2 5
PB3 6
PC0 7
PC1 8
PC2 9
PC3 10
PD0 11
PD1 12
PD2 13
PD3 14
PE0 15
PE1 16
PE2 17
PE3 18
TEST 19
VSS 20
OSC1 21
42 PA1
41 PA0
40 VDD(+5V)
39 PJ3
38 PJ2
37 PJ1
36 PJ0
35 PI3
34 PI2
33 PI1
32 PI0
31 PG3
30 PG2
29 PG1
28 PG0
27 PF3/INT
26 PF2/SCK
25 PF1/SO
24 PF0/SI
23 RES
22 OSC2
LC 6520

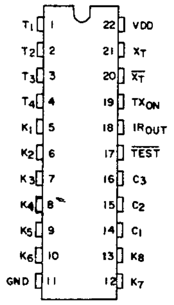

PA0-3
PORT A
PB0-3
PORT B
PC0-3
PORT C
PD0-3
PORT D
PE0-3
PORT E
PF0-3
PORT F
I/O BUFFER
RAM (256X4/128X4)
F
WR
DP
PC
STACK 1
STACK 2
STACK 3
STACK 4
STACK 5
STACK 6
STACK 7
STACK 8
ROM (4K/2K BYTE)
IR
I DEC
SYSTEM BUS
E
AC
ALU
STS
CF
ZF
EXTF
TMF
CSF
TSF
TM
CTL
INT
OSC
OSC 1
OSC 2
RES
TEST
VDD
VSS
SERIAL SHIFT REGISTER
I/O BUS
PF1/SO
4/8 BIT
LOWER DIGIT
4 BIT
PF0/SI
4/8BIT
HIGHER DIGIT
PF2/SCK
PF3/INT
PORT G
PORT I
PORT J
PG0-3
PI0-3
PJ0-3

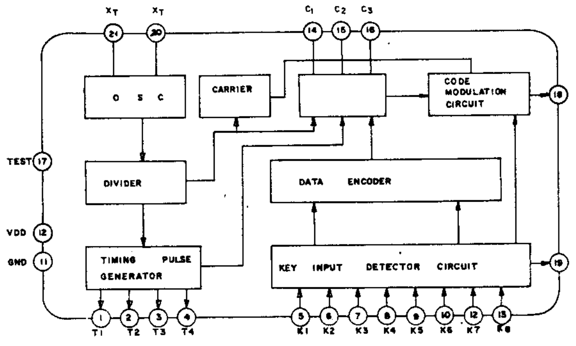
2. LC7461M (TIC1; REMOCON IC)


Ki0 1
Ki1 2
Ki2 3
Ki3 4
C4 5
C5 6
OUT 7
VDD 8
TEST 9
OSC1 10
OSC2 11
VSS 12
24 C3
23 C2
22 C1
21 C0
20 Ko0
19 Ko1
18 Ko2
17 Ko3
16 Ko4
15 Ko5
14 Ko6
13 Ko7


VDD
VSS
TEST
Ko0
Ko7
KEY OUTPUT TIMING SIGNAL
OUTPUT
OUT
OSC1
OSC2
OSC
Prescaler
f OSC/12
decoder
Ki0
Ki3
Key INPUT
KEY DATA Register
CUSTOM CODE Register
Co
C5

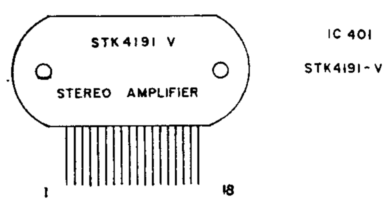
3. TC9132P (TIC2)

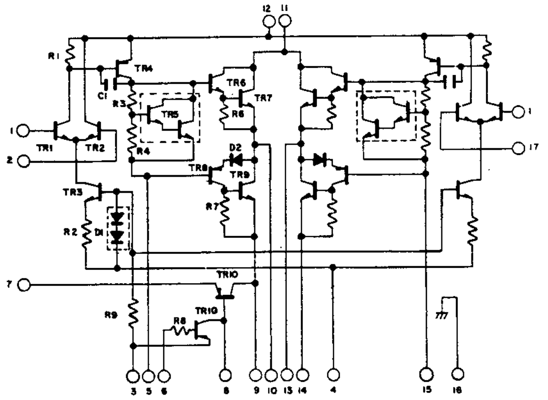

T_1 1
T_2 2
T_3 3
T_4 4
K_1 5
K_2 6
K_3 7
K_4 8
K_5 9
K_6 10
GND 11
22 VDD
21 X_T
20 $\overline{X_T}$
19 TX_{ON}
18 IR_{OUT}
17 $\overline{TEST}$
16 C_3
15 C_2
14 C_1
13 K_8
12 K_7


X_T
X_T
C_1
C_2
C_3
OSC
CARRIER
CODE MODULATION CIRCUIT
TEST
DIVIDER
DATA ENCODER
VDD
GND
TIMING PULSE GENERATOR
KEY INPUT DETECTOR CIRCUIT
T1
T2
T3
T4
K1
K2
K3
K4
K5
K6
K7
K8

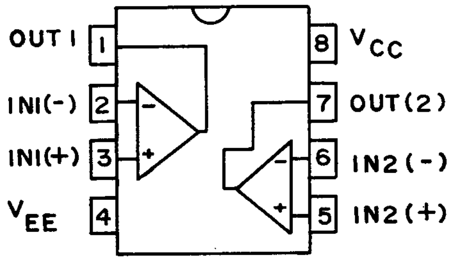
ICT01 TC 9132P

4. STK-4191V (AIC1; POWER IC)

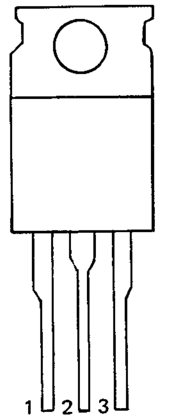

STK4191 V
STEREO AMPLIFIER
1
18
IC 401
STK4191-V


12
11
R1
TR1
TR2
TR3
TR4
TR5
TR6
TR7
TR8
TR9
TR10
R2
R3
R4
R5
R6
R7
R8
R9
D1
D2
1
2
7
17
3 5 6
8
9 10 13 14
4
15 16

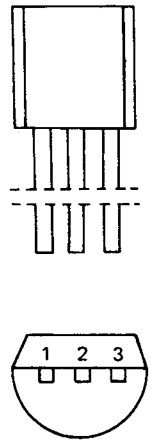
5. MC4558C
(BIC2, EIC1, SIC1.2.3, QIC1, PIC1)


OUT1 1
IN1(-) 2
IN1(+) 3
V_{EE} 4
8 V_{CC}
7 OUT(2)
6 IN2(-)
5 IN2(+)

6. MC7812C (RIC1)
KSA614-O (RQ2)



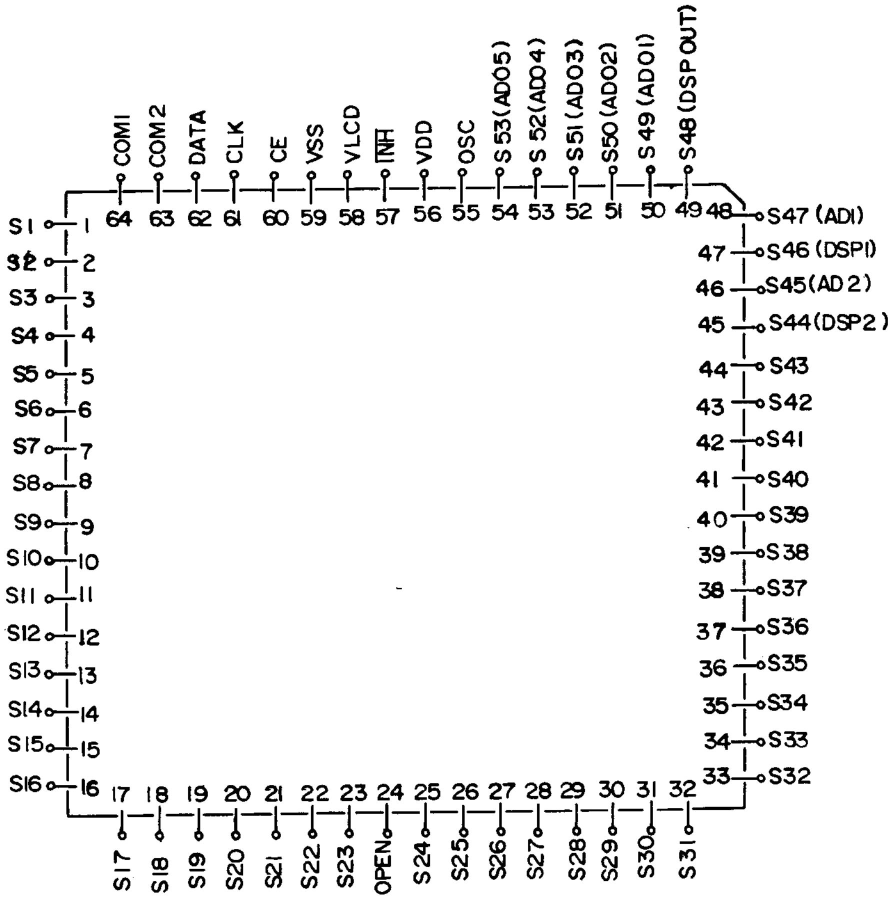
7. KSA733-Y
KSA708-Y
KSC945-Y
KSC1008-Y

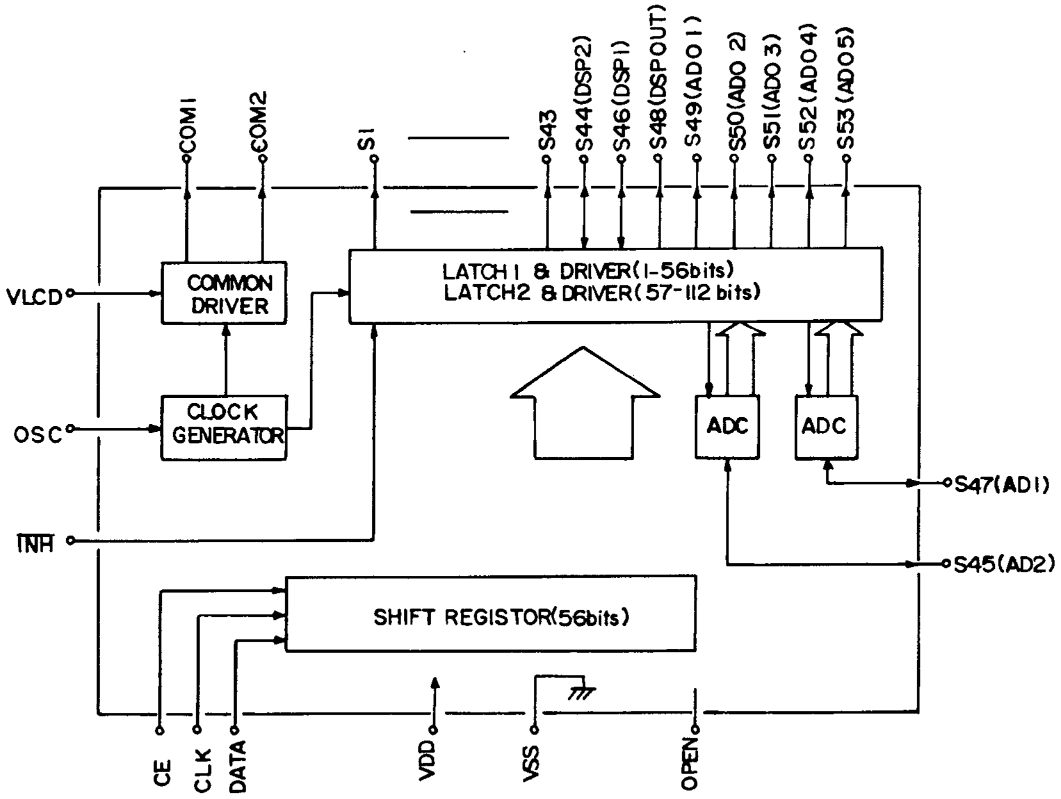


1. EMITTER
2. BASE
3. COLLECTOR

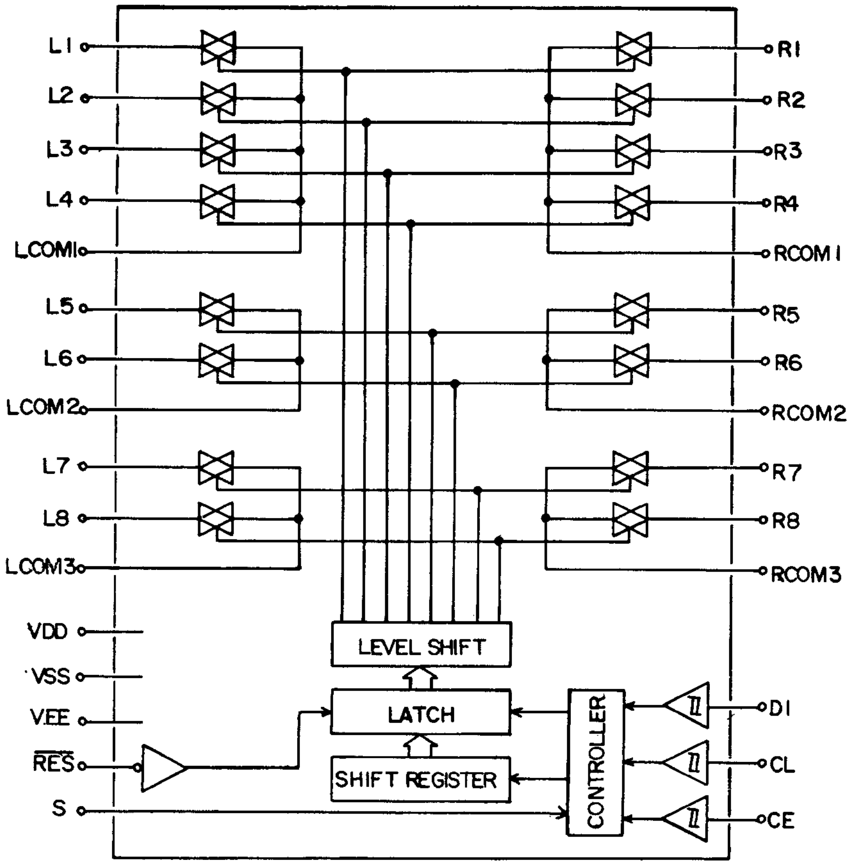
PIN NO / TR	1	2	3
MC7812	IN	GND	OUT
KSA614-O	BASE	COLLECTOR	EMITTER

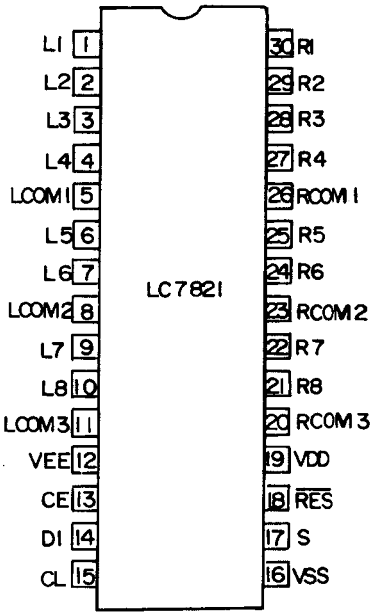
8. LC 7582A(UIC2) : LCD DRIVER


COM1
COM2
DATA
CLK
CE
VSS
VLCD
INH
VDD
OSC
S53(ADO5)
S52(ADO4)
S51(ADO3)
S50(ADO2)
S49(ADO1)
S48(DSP OUT)
64 63 62 61 60 59 58 57 56 55 54 53 52 51 50 49 48
S47 (AD1)
S46 (DSP1)
S45(AD2)
S44(DSP2)
S43
S42
S41
S40
S39
S38
S37
S36
S35
S34
S33
S32
47 46 45 44 43 42 41 40 39 38 37 36 35 34 33
S1 S2 S3 S4 S5 S6 S7 S8 S9 S10 S11 S12 S13 S14 S15 S16
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
S17 S18 S19 S20 S21 S22 S23 OPEN S24 S25 S26 S27 S28 S29 S30 S31

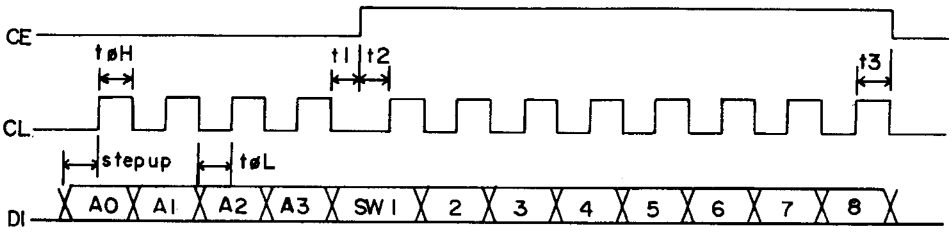

COM1
COM2
S1
S43
S44(DSP2)
S46(DSP1)
S48(DSPOUT)
S49(ADO1)
S50(ADO2)
S51(ADO3)
S52(ADO4)
S53(ADO5)
VLCD
COMMON DRIVER
LATCH1 & DRIVER(1-56bits)
LATCH2 & DRIVER(57-112 bits)
OSC
CLOCK GENERATOR
ADC
ADC
S47(AD1)
INH
S45(AD2)
SHIFT REGISTOR(56bits)
CE
CLK
DATA
VDD
VSS
OPEN

9. LC 7821(BIC1) : FUNCTION IC


L1
L2
L3
L4
LCOM1
L5
L6
LCOM2
L7
L8
LCOM3
VDD
VSS
VEE
RES
S
R1
R2
R3
R4
RCOM1
R5
R6
RCOM2
R7
R8
RCOM3
DI
CL
CE
LEVEL SHIFT
LATCH
SHIFT REGISTER
CONTROLLER

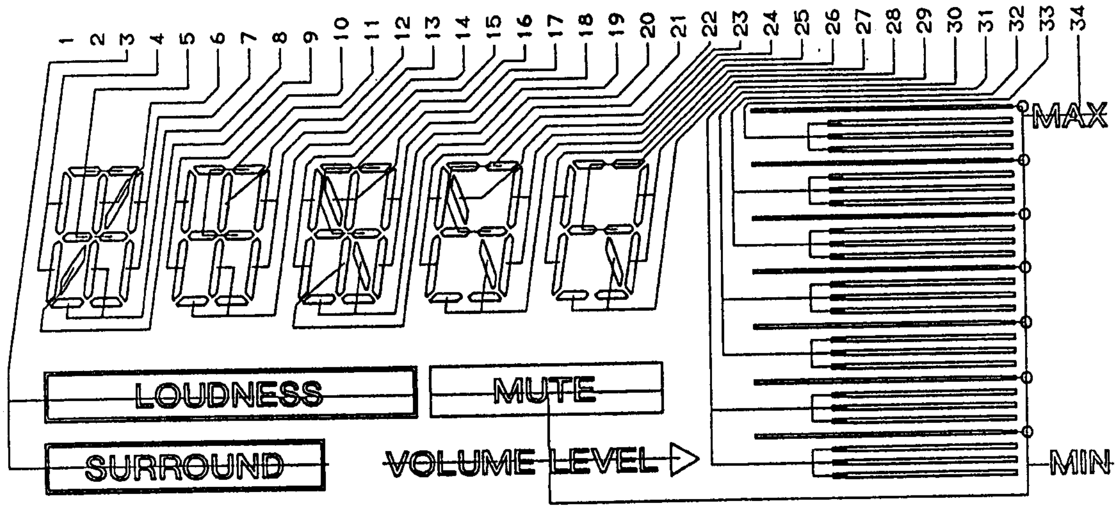

LC7821
L1 1
L2 2
L3 3
L4 4
LCOM1 5
L5 6
L6 7
LCOM2 8
L7 9
L8 10
LCOM3 11
VEE 12
CE 13
DI 14
CL 15
30 R1
29 R2
28 R3
27 R4
26 RCOM1
25 R5
24 R6
23 RCOM2
22 R7
21 R8
20 RCOM3
19 VDD
18 RES
17 S
16 VSS

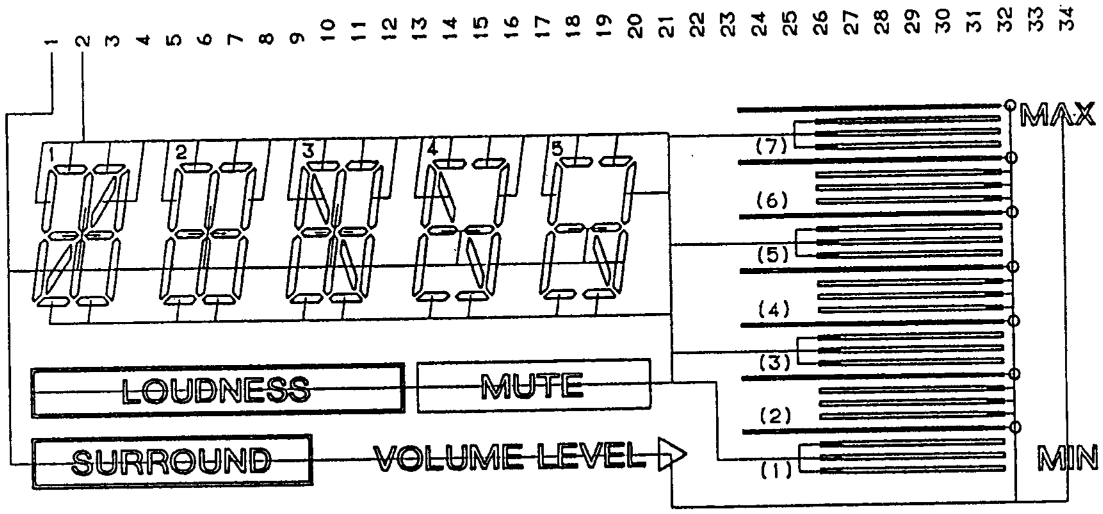
TIMING CHART

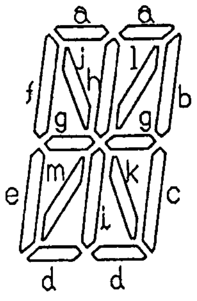

CE
CL
DI
tφH
t1
t2
t3
stepup
tφL
A0
A1
A2
A3
SW1
2
3
4
5
6
7
8

$t\phi H$, $t\phi L$, $t1$, $t2$, $t3 > 0.5\mu S$

10. LCD 8086MJP(LCD1 : LCD DISPLAY)


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34
MAX
LOUDNESS
MUTE
SURROUND
VOLUME LEVEL
MIN


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34
1
2
3
4
5
MAX
(7)
(6)
(5)
(4)
(3)
(2)
(1)
LOUDNESS
MUTE
SURROUND
VOLUME LEVEL
MIN


a
a
j
h
l
f
b
g
g
m
k
e
c
i
d
d

NO	COM1	COM2
1	—	COM
2	COM	—
3	LOUD-NESS	SURR-OUND
4	1 f	1 e
5	1 a	1 g
6	1 l	1 h
7	1 b	1 c
8	1 d	1 i
9	—	1 m
10	2 f	2 e
11	2 a	2 g
12	—	2 h

NO	COM1	COM2
13	2 b	2 c
14	2 d	2 i
15	3 f	3 e
16	3 a	3 g
17	3 j	3 h
18	3 b	3 c
19	3 d	3 k
20	—	3 i
21	4 f	4 e
22	4 a	4 g
23	4 j	—

ON	COM1	COM2
24	4 b	4 c
25	4 d	4 k
26	5 f	5 e
27	5 a	5 g
28	5 b	5 c
29	5 d	5 k
30	(1)	(2)
31	(3)	(4)
32	(5)	(6)
33	(7)	—
34	MUTE	1)

13. IC PIN'S VOLTAGE READING

1. LC6520H (UIC1) ※ TEST CONDITION : TUNER MODE

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
VOLTAGE	4.7	0	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	0	0.34	0.35	0.99	0.22	0.8	0
PIN NO.	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
VOLTAGE	0	0	0	2	2	5	0	0	0	4.7	0.146	4.6	4.6	2	4.7	0.6	0.1
PIN NO.	35	36	37	38	39	40	41	42									
VOLTAGE	0.19	0.378	0	0	0	4.9	4.3	0									

2. LC7821 (BIC1)

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
VOLTAGE	0	0	0	0	0	0	0	0	0	0	−12.5	0	0	0	0	0	0
PIN NO.	18	19	20	21	22	23	24	25	26	27	28	29	30				
VOLTAGE	0	12.5	0	0	0	0	0	0	0	0	0	0	0				

3. LC7582 (UIC2)

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
VOLTAGE	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
PIN NO.	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
VOLTAGE	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3
PIN NO.	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
VOLTAGE	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
PIN NO.	52	53	54	55	56	57	58	59	60	61	62	63	64				
VOLTAGE	2.3	2.3	2.3	3.6	4.7	4.7	4.7	4.8	0	0.64	0.2	2.4	2.4				

4. STK4191V (AIC1)

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
VOLTAGE	0	0	0	−43	−1.3	0	−45.5	−46	−46.5	0	46.5	44.9	0	−46.5	−1.3	0	0	0

5. MC7812 (RIC1)

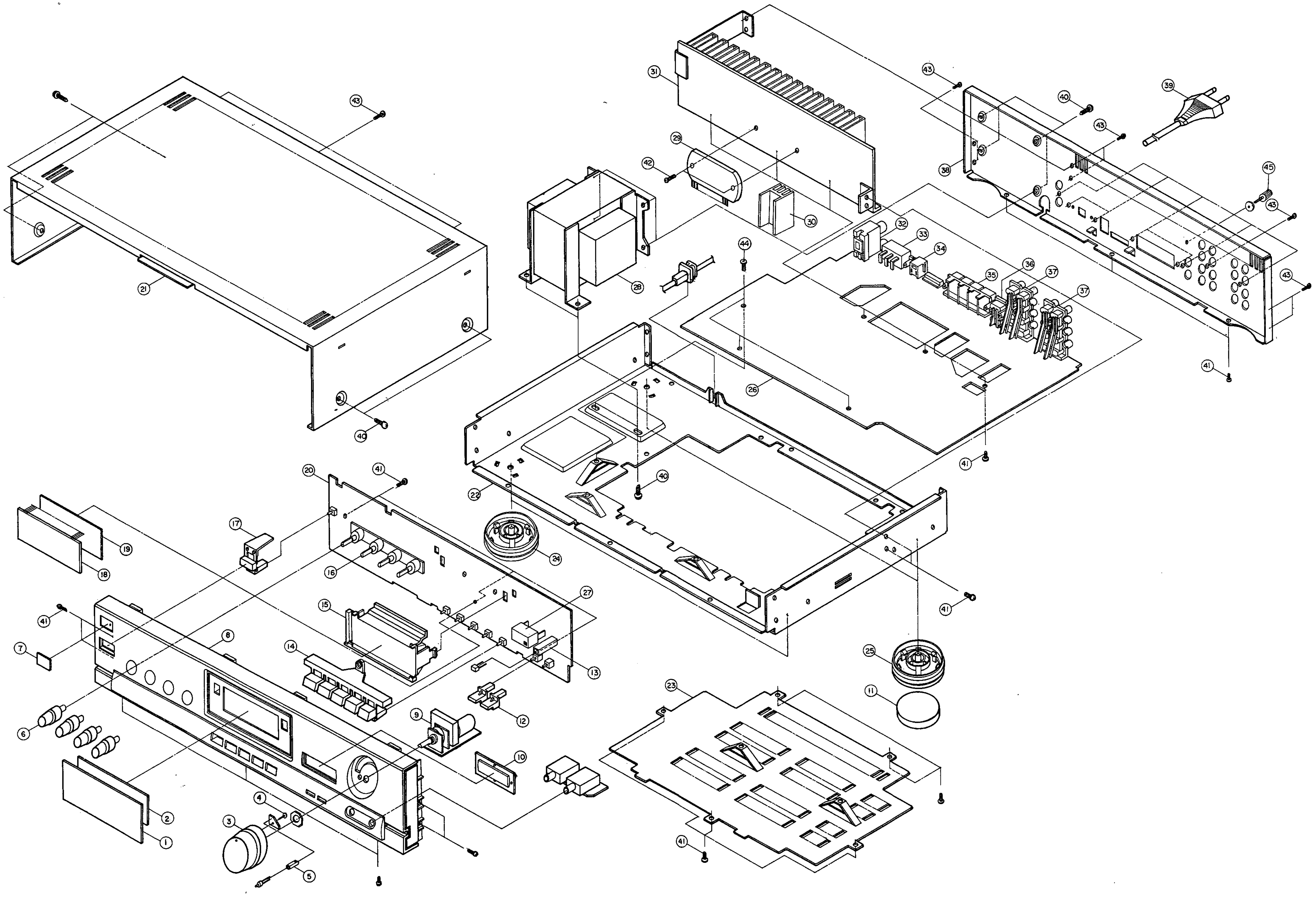
PIN NO.	1	2	3
VOLTAGE	23.5	0	12.0

6. MC4558C(PIC1, BIC2, EIC1, SIC1, SIC2, SIC3, QIC1)

PIN No. 4⇒ −15V, PIN No. 8→15V

OTHERS ⇒ 0V

14. EXPLODED VIEW


43
21
40
31
29
42
30
28
44
32
33
34
35
36
37
37
26
43
40
43
38
39
45
43
43
41
41
40
22
20
41
17
19
18
16
24
27
15
14
41
7
8
13
6
9
12
10
2
1
4
3
5
23
25
11
41
41

15. PARTS DESCRIPTION

15-1. ELECTRONIC PARTS

MAIN PCB ASS'Y (19000-000-200)

LOCATION NO.	CODE NO.	DESCRIPTION	SPECIFICATION	Q'TY	REMARK
BIC1	12109-401-270	IC-FUNCTION	LC7821	1	
AIC1	12119-205-050	IC-POWER	STK-4191V	1	
PIC1, EIC1, BIC2	12119-401-170	IC-OPAMP	MC4558C	3	
RIC1	12109-401-690	IC-REGULATOR	MC7812C	1	⚠
RD1	12169-210-720	DIODE-BRIDGE-KBPC804	8A 400V	1	⚠
RD2	12169-219-210	DIODE-RECT	2KBP02	1	⚠
RD6, RD7, RD8, RD9 RD10, ZD1, ZD2, ZD4 QD1, QD2, AD1	12169-201-080	DIODE-RECTIFIER	IN4001, TAPE	11	⚠
RD12, RD13	12169-403-920	DIODE-ZENER	1W13.8-15.6V UZP-15B	2	⚠
RD15	12169-404-110	DIODE-ZENER	RD5.6FB/UZP-5.6B	1	⚠
ZD5	12169-403-200	DIODE-ZENER	RD407E/UZ4.7BM	1	
YD1L, YD1R, RD14,YD2L YD2R, ZD3, YD3	12169-301-290	DIODE-SW	1SS53/IN4148, CT: 6PF	7	
UP5, YQ1, YQ2, ZQ3, ZQ5	12149-101-520	TRANSISTOR	KSA733-Y, TAPE	5	
UQ3, UQ4, ZQ1, ZQ3, ZQ5	12149-301-900	TRANSISTOR	KSC945-Y, TAPE	5	
RQ1, ZQ2	12149-301-930	TRANSISTOR	KSC1008-Y, TAPE	2	
RQ2	12139-103-560	TRANSISTOR	KSA614-O	1	⚠
RLD2	12309-104-700	LED	SLC-26VR5	1	
AR9L, AR9R	11039-904-060	R-CEMENT, WIRE	RW5P 0.27-J	2	
RR9	11048-477-151	R-METAL OXIDE	RS1T 150-J MINI TYPE	2	
RR2, RR5, RR7, AR12L, AR12R	11048-477-331	R-METAL OXIDE	RS1T 330-J MINI YTPE	4	
AR1L, AR1R	11048-477-479	R-METAL OXIDE	RS1T 4.7-J MINI TYPE	2	
RFR1, RFR2	11058-527-010	R-FUSIBLE	2P 1-J	2	⚠
RFR3	11048-577-339	R-METAL OXIDE	RS 2P 3.3-J, TAPE	1	⚠
RFR4	11058-327-011	R-FUSIBLE	RD 1/2P 1-J	1	⚠
MAIN VR	11219-804-050	VR-ROUND MOTOR	RK1631MA03UA	1	
RC4	11609-105-222	C-ELECTROLYTIC	CE04W 35V 2200 μF	1	
RC3	11609-105-332	C-ELECTROLYTIC	35V/3300 μF	1	
RC1, RC2	11609-107-472	C-ELECTROLYTIC	CE04W 75V 4700 μF	1	
RRL1	14729-501-080	RELAY	DH12DI-O (M)	1	⚠
RRL1	14729-501-060	RELAY	DH2U 24VDC TV-3	1	
CL1, CL2	12429-070-130	COIL-CHOCKE	470UH R-TYPE	2	
AL1L, AL1R	12429-060-031	COIL-CHOCKE, SPK	2R2UH-K F7R9R/D 1/4P 10-J	2	
	13303-500-610	TERMINAL-BOARD PUSH	4P PUSH TACK	1	
HEAD JACK	13339-105-007	JACK-HEAD PHONE	HYT 60-065(M)	1	
MIC JACK	13339-105-008	HEAD PHONE JACK	HYT80-065(M)	1	
	13339-417-020	JACK-RCA	S-439A 8P	2	
	13339-544-040	JACK-RCA	ABS & BST2 2P (S-348)	1	
	13339-616-010	MODULE JACK	616PCB4-D	1	
	13339-212-003	AC OUT LET	DAO 430 (PI4.0)	1	⚠
	13599-801-060	VOLTAGE SELECTOR	SDKGA4241A	1	⚠
	14709-201-040	FUSE	51T 250V 32MA UL/CSA	1	⚠
	14709-241-051	FUSE	51T 250V 63MA KS	1	⚠
	14709-241-240	FUSE	T250V 1.6A 20EUR	1	⚠
	14709-241-280	FUSE	T250V 3.15A 20EUR	1	⚠
	12869-219-710	TRANS-POWER REMOCON	EI35 x 14 110/220V(OPTION)	1	⚠
	12869-219-720	TRANS-POWER REMOCON	EI35 x 14 120/240V(OPTION)	1	⚠
	12869-217-410	TRANS-POWER	EI85.8 x 50 RS750A(OPTION)	1	⚠
	12869-217-420	TRANS-POWER	EI85.8 x 50 120/240V(OPTION)	1	⚠
TIC1	12109-401-180	IC-REMOCON	LC7461M-8100	1	
TIC2	12119-101-840	IC-REMOCON	TC9132P	1	
TCQ3	12149-101-520	TRANSISTOR	KSA733-Y, TAPE	1	
TQ1, TCQ2	12149-401-150	TRANSISTOR	KSD471-Y, TAPE	2	
TLD1, TLD2	12309-101-700	LED-INFRARED	EL1	2	
TCF1, TCF2	14539-504-030	CERAMIC-RESONATOR	CSB455EBL	2	
PWB	13014-575-632	PWB-REMOCON	175 x 168 x 1.6T RS750A DOM	0.3	
	13059-808-246	POWER CORD ASSY	KKP-4 19C/B-161 W/S 220m/m	1	⚠
	13059-808-300	AC-CORD	SPT 2 # 28 KKP-10W 2FT W/S	1	⚠
	13059-808-211	POWER CORD AC	KP-560LTSA-2F 200m/m W/S	1	⚠
	13053-505-010	AC-WIRE	BS6500 GTBS 2.5M STOPPER200 M/M	1	⚠

FRONT PCB ASS'Y (19200-000-200)

LOCATION NO.	CODE NO.	DESCRIPTION	SPEIFICATION	Q'TY	REMARK
UIC1	12109-401-190	IC-MICOM	LC6520H-4294 AMP	1	
UIC2	12109-401-260	IC-LCD DRIVER	LC7582	1	
SIC1, SIC2, SIC3, QIC1	12119-401-170	IC-OP AMP	MC4558C	4	
LCD1	12339-101-020	LCD	8086MJP-AMP	1	
RE1	12199-101-130	REMOCON EYE	SV06C	1	
RLD1	12309-104-360	LED	SLB-55MG (GRN)	1	
LAMP1	12058-520-820	LAMP	DC12V 100MA 200M/M WAFER	1	
UD5, UD8	12169-201-080	DIODE-RECTIFIER	IN4001, TAPE	2	
UD1, UD2, UD3	12169-301-290	DIODE-SW	1SS53/1N4148, CT: 6PF	3	
CQ3, CQ4	12149-101-560	TRANSISTOR	KSA708-Y, TAPE	2	
CQ5, UQ20	12149-301-900	TRANSISTOR	KSC945-Y, TAPE	2	
CQ1, CQ2	12149-301-930	TRANSISTOR	KSC1008-Y, TAPE	2	
QVR1	11299-102-010	BLOCK-VR	RK164630	1	
UX1	14534-504-040	CERAMIC-RESONTAOR	CSA4.00MG	1	
SSW1	13529-203-900	SWITCH-PUSH	SPH221A	1	
US2	13529-203-980	PUSH-SWITCH	SPH222A	1	
US1, US4, SU6, SU7 SU8, US9	13559-901-080	S/W TACT	SKHHPP030A	6	
	16602-502-010	HOLDER-LCD (A)	ABS WHT + TI02	1	
	16604-538-110	HOLDER-STAND BY	ABS 94HB	1	
	13013-517-110	PWB-FRONT	RS-750A 330 x 197 x 1.6T 94HB	0.5	

15-2. MECHANICAL PARTS

NO.	CODE NO.	DESCRIPTION	SPECIFICATION	Q'TY	REMARK
1	17654-558-110	WINDOW-FRONT	ACRYL 2.0T RS750A	1	
2	17654-562-010	WINDOW-LCD	PC 0.5T RS750A	1	
3	17623-573-610	KNOB-VOLUME	ABS 94HB (RS-1200A)	1	
4	16414-503-710	PIN-VOLUME	PP	1	
5	16604-521-510	HOLDER-LED	ABS BLK	1	
6	17623-575-110	KNOB-ROTARY	ABS 94HB	4	
7	18024-600-530	BADGE-HI-FI	COPPER 0.3T GOLD (HI-FI)	1	
8	16001-609-410	PANEL-FRONT	HIPS 94HB	1	OPTION
9	11219-804-050	VR ROUND MOTOR	RK1631MA03UA	1	
10	17644-516-610	LENSE-FRONT	ACRYL SMOKE	1	
11	16804-516-610	CUSHION-FOOT	EVA SPONGE 3.0T	4	
12	17624-621-910	KNOB-PUSH	ABS 94HB	2	
13	16604-538-110	HOLDER-STAND BY	ABS 94HB	1	
14	17623-574-310	KNOB-FUNCTION	ABS 94HB	1	
15	16602-502-010	HOLDER-LCD (A)	ABS WHT + TI02	1	
16	11299-102-010	BLOCK-VR	RK 164630	1	
17	17624-621-610	KNOB-POWER	ABS 94HB	1	

NO.	CODE NO.	DESCRIPTION	SPECIFICATION	Q'TY	REMARK
18	12339-101-020	LCD	8086MJP-AMP	1	
19	17654-559-210	FILTER-LCD (A)	PC 0.5T SMOKE WHT	1	
20	13013-517-110	PWB-FRONT	330 x 197 x 1.6T 94HB	1	
21	16002-517-010	CABINET-TOP	VINYL STEEL 0.8T	1	
22	16021-504-610	CHASSIS-BOTTOM	EGI 1.0T RS750A	1	
23	16022-529-810	COVER-BOTTOM	EGI 1.0T RS750A	1	
24	16072-500-110	FOOT	ABS 94HB HOT STAMPING (K860A/QUE)	2	
25	16072-500-120	FOOT-1	ABS 94HB BLK K860 QUE	2	
26	13013-517-210	PWB-MAIN	330 x 247 x 1.6T 94 1V-O RS750A	1	
27	12199-101-130	REMOCON-EYE	SV06C	1	
28		TRANS-POWER	EI85.8 x 50 RS750A	1	OPTION
29	12119-205-050	IC-POWER	STK-4191-V	1	
30	15684-507-610	HEAT-SINK	EXTR AL WHT RS750A	1	
31	15682-503-110	HEAT-SINK ASS'Y	AL EXTR + PLATE RS750A	1	
32	13339-212-003	AC-OUTLET	DAO 430 (PI4.0)	1	OPTION
33	13599-801-060	VOLTAGE SELECTOR	SDKGA4241A	1	OPTION
34	13339-616-010	MODULE JACK	616PCB4-D	1	
35	13303-500-610	TERMINAL-BOARD PUSH	4P PUSH TACK	1	
36	13339-544-040	JACK-RCA	ABS & BST2 2P (S-438)	1	
37	13339-417-020	JACK-RCA	S-439A 8P	2	
38	16022-529-510	CHASSIS-REAR	EGI 0.8T	1	
39	13059-808-245	POWER-CORD-AC CP	KKP-419 C/B-161 200M/M	1	
40	17428-240-081	SCREW-TAP TITE TH	T-4 x 8 FZY	6	
41	17458-130-081	SCREW-TAP TITE BH	B-3 x 8 FE FZY	40	
42	17448-130-201	SCREW-TAP TITE RH	B-3 x 20 FE FZY	2	
43	17428-240-123	SCREW-TAP TITE TH	T-4 x 12 FZB	4	
44	17558-230-101	SCREW-TAP BH SPEC	2S-3 x 10 FE FZY	3	
45	13104-501-610	TERMINAL-SCREW	SPC1 + ABS BLK	1	
46	17458-230-101	SCREW-TAP TITE BH	2S-3 x 10 FE FZY	4	
47	16854-100-610	SPACER-RING	PI8 x PI 3.2 x 1T FIBER	2	
48	17304-500-210	WASHER-PLAIN	4.5PI x 10PI x 1.0T SPCI FN1	1	

- THE FOLLOWING ITEMS SHOULD BE OBSERVED BEFORE REPLACING OUTPUT IC TO PREVENT UNNECCESSARY PARTS ORDERS OR PREVENTING DEFECTS FROM OCCURING.

1. BE SURE TO CHECK OUTPUT IC WHEN THE SPEAKER IS MALFUNCTIONING BECAUSE OUTPUT IC COULD BE DAMAGED. IF THERE IS NO AUDIO AS A RESULT OF SPEAKER WIRE SHORTENING WHICH CAUSES THE PROTECTION SYSTEM (PROTECTOR) TO OPERATE, MAKE SURE WIRE DOESN'T SHORT OUT AGAIN.

2. CHECK THE IC INPUT VOLTAGE AND ± VCC VOLTAGE. IF AC INPUT VOLTAGE AND VCC VOLTAGE ARE NOT TRIGGERING NORMALLY, OR VOLTAGES ARE NOT READ, LOOK FOR THE CAUSE OF DEFECT IN A DIFFERENT PLACE.CHECK THE FOLLOWING EVEN IF THE INPUT VOLTAGE AND ± VCC VOLTAGE ARE READ NORMALLY BUT THERE IS NO OUTPUT.

3. CHECK THE CENTRAL VOLTAGE (OUTPUT PORT: 0V)
   CHECK THE CIRCUITRY IN THE OUTPUT SECTION IF THE CENTRAL VOLTAGE IS NORMAL BUT NO AUDIO.

4. CHECK THE SOLDERING OF CONDENSER.
   CHECK IF SOLDERING OF CONDENSER (ASSOCIATED WITH THE OUTPUT IC) AND RECTIFICATION CONDENSER IS CORRECT (COLD SOLDERING MAY RESULT IN DISTORTION OR INSENSIBLE SOUND).

5. CHECK THE COLD SOLDERING OF OUTPUT IC.
   CHECK IF THE OUTPUT IC IS SHORTED OUT OR SOLDERING IS MISAPPLIED.

6. BEFORE REPLACING THE OUTPUT IC, BE SURE TO CHECK THE ABOVE DESCRIBED.
   IF THE OUTPUT IC IS FOUND TO BE DEFECTIVE, REPLACE IC AND PLEASE SEND THE DFFECTIVE PARTS

7. SOLDER CONDENSER AFTERWARDS TO PREVENT DEFECT FROM OCCURING FOLLOWING THESE CHECKS.